APPLICATION

FOR

UNITED STATES LETTERS PATENT

ENTITLED

NETWORKED AUDIO POSTING METHOD AND SYSTEM

TO WHOM IT MAY CONCERN:

BE IT KNOWN THAT (1) JEFFREY M. VALENTINE, (2) MICHAEL BERNARDO, and (3) BENJAMIN KRYSIAK, of (1) 51 Lopez Street, Apartment 4, Cambridge, Middlesex County, Massachusetts, (2) 2 Longwood Drive, Andover, Essex County, Massachusetts, and (3) 11 Monument Square, Charlestown, Middlesex County, Massachusetts, invented certain new and useful improvements entitled as set forth above of which the following is a specification:

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3   NETWORKED AUDIO POSTING METHOD AND SYSTEM

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5   CLAIM OF PRIORITY

6   This application claims priority to U.S.S.N. 60/214,151,

7   entitled "Networked Audio Posting Method and Apparatus," filed on

8   June 26, 2000, naming Jeffrey M. Valentine, Michael Bernardo, and

9   Benjamin Krysiak as inventors, the contents of which are herein

10 incorporated by reference in their entirety, and this application

11 also claims priority to U.S.S.N. 60/254,749 entitled "Networked

12 Audio Posting Method and Apparatus," filed December 11, 2000 and

13 naming Jeffrey M. Valentine, Michael Bernardo, and Benjamin

14 Krystak as inventors, the contents of which are herein

15 incorporated by reference in their entirety.

16

17   BACKGROUND

18 (1) Field

19   The disclosed methods and systems relate generally to audio

20 data on a communications network, and more particularly to

21 distributing audio data on a communications network such as the

22 internet.

23 (2) Description of Related Art

The internet is arguably the most well-known communications
network, with a percentage of personal computers purchased for
the sole purpose of internet communications. A popular feature
of the internet is the World Wide Web that allows network users
access to posted electronic information at an ever-increasing
number of "websites" located throughout the network.
Accordingly, other devices such as cellular phones and personal
digital assistants (PDAs) are being enhanced to provide internet
accessibility.

Media data including audio and graphics information, can be
among the more popular data accessed through the internet.
Additionally, streaming audio and/or video data can be accessed
in near real-time, allowing users to listen to radio broadcasts,
for example. There are many different applications that may be
installed on various user's personal computers to facilitate the
download and subsequent listening to or viewing of audio or video
data, respectively.

Similarly, for an internet user to create audio or video
data, specialized software applications and accessory equipment
can be required to be installed on the user's personal computer
or other network accessible device. Such applications can be
expensive, can require frequent updates, and can consume large
amounts of memory. Additionally, the applications can be
operating-system dependent, and therefore a user typically cannot

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transport the application to another computer with a different operating-system. Similarly, data generated on one particular operating system may not be viewed on or accessed by a personal computer or other device using a different operating system.

SUMMARY

The systems and methods allow audio data to be distributed with text documents, including HTML documents, over a network such as the internet. The audio data can be an audio file that can be located on a central server that can also be accessed by the network. The audio data can be associated with at least one identifier that can include, for example, a Personal Identification Number (PIN) or a customer ID number, although such examples are provided for illustration and not limitation. In some embodiments, a second identifier can be generated and associated with the audio data. The second identifier can thereafter be provided for incorporation in the text document. For example, the second identifier can be associated with a pointer or other reference that is included in the text document. Additionally or optionally, the second identifier can be provided in an email or HTTP post that can allow the audio data to be referenced and/or approved before the second identifier is included in the text document. In some embodiments, the second identifier can be the same as the first identifier.

1   Other objects and advantages of the methods and systems will

2   become obvious hereinafter in the specification and drawings.

3

4   BRIEF DESCRIPTION OF THE DRAWINGS

5   FIG. 1 is an architectural block diagram of a system

6   implementing one embodiment of the invention;

7   FIG. 2 is a block diagram of a first embodiment according to

8   FIG. 1;

9   FIG. 3 is a block diagram of a second embodiment according

10   to FIG. 1;

11   FIG. 4 is a representative diagram of a database for systems

12   according to FIGs. 1 through 3;

13   FIG. 5 is a block diagram of a third embodiment according to

14   FIG. 1; and,

15   FIG. 6 is a block diagram of a fourth embodiment according

16   to FIG. 1.

17

18   DESCRIPTION

19   To provide an overall understanding, certain illustrative

20   embodiments will now be described; however, it will be understood

21   by one of ordinary skill in the art that the systems and methods

22   described herein can be adapted and modified to provide systems

23   and methods for other suitable applications and that other

1 additions and modifications can be made without departing from

2 the scope of the systems and methods described herein.

3   The systems and methods allow communications systems users,

4 such as internet users, to create audio files, and post such

5 audio files on a common or centrally located server for retrieval

6 (e.g., listening). In some embodiments, the audio files can be

7 protected to allow retrieval and/or editing by specified or

8 identified users, using, for example, a PIN. The audio creation,

9 posting, and retrieval can allow network users to listen to

10 streaming audio while viewing a website, web page, email, or

11 other text document, without requiring local software or hardware

12 installation. Warning boxes that can be caused by required

13 installations, and buffering delays, can be avoided with the

14 systems and methods.

15   In one embodiment, the audio stream can be served by HTTP on

16 port 80 to eliminate firewall or other filtering exclusions.

17   In one embodiment, the methods and systems can be

18 implemented using a platform independent technology such as Java.

19 In such an embodiment, the methods and systems may not require

20 installation, but rather, can utilize the processes of the

21 installation-free native code Java applet. The audio data can be

22 posted using standard HTTP conventions to allow anyone with a

23 computer microphone and computer audio listening device to create

24 and listen to audio files.

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The methods and systems can also convert an audio stream from one format to another format, for example, from the well-known "GSM.wav" format, to the "mu-law.au" format.

In one embodiment, internet users in a threaded discussion group can exchange entertainment and information in an audio form. For example, one user can post an audio message to the group, wherein another user can thereafter listen to the audio message and reply to it by creating another audio message. The original posting can constitute a new thread such that other users can increase the size of the thread by replying (with their own voice) to either the original or second user. Other users can additionally select to start a new thread.

The methods and systems can be provided as a tool that can be understood as a service to a subscriber website. The service can provide audio posting capability to the website as a private-labeled feature, without imposing significant software, hardware, or bandwidth constraints on the subscriber or the subscriber's resources. In one embodiment, a specified Universal Resource Location (URL) can be added to the subscriber web site, wherein the URL can activate an applet that is customized or private-labeled for the subscriber, and by the subscriber. The applet can present a user of the subscriber website with audio controls, prompting the user to, for example, record, stop, preview, pause, and save a spoken audio clip or audio data that the user can

1   record by speaking into a microphone. The user-generated audio

2   data can be accepted as an audio file for transmission to a

3   centrally located server or other computer. The central server

4   can issue a HTTP post to a specified CGI/servlet acceptor that

5   receives information on the storage location of the file, and

6   stores it in a subscriber database. The subscriber website can

7   include another URL that can activate an applet that is private-

8   labeled for that subscriber, to present a subscriber website user

9   with audio controls to pause, stop, and view the progress of an

10   audio playback in response to an audio file that can be requested

11   from the central server. The central server can return the audio

12   file to the subscriber computer, and the user can listen to the

13   file using an audio device.

14   The methods and systems can dynamically generate the central

15   server location of an audio file that is created and stored to

16   the central computer, as described herein, and later retrieved.

17   The subscriber can provide full audio message board

18   functionality as a complete product, without requiring website

19   software, hardware, or other infrastructure alterations.

20   As indicated herein, the methods and systems can provide

21   private-labeled applets to website subscribers. In one

22   embodiment, a generic applet, when called by a subscriber's web

23   page, can activate the applet server and communicate the

24   subscriber identification. The server can return assorted

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graphics to the generic applet for display by the generic applet, thereby presenting to the subscriber a customized, subscriber-specific applet.

The methods and systems can hence allow audio data to be associated with a text document. In some embodiments, the text document can be a HTML document, including a web page, although such an example is provided merely for illustration and not limitation. Those with ordinary skill in the art will recognize that web pages include merely one form of HTML documents, and other HTML and non-HTML documents can be utilized while remaining within the scope of the disclosed methods and systems.

Referring now to FIG. 1, there is a block diagram of a system 10 that includes one embodiment of the methods and systems disclosed herein for posting audio data for access by a network or other remote device, including for example, a telephone. Accordingly, although the systems and methods have wide applicability, for the purposes of illustrative discussion, it can be understood that the illustrated systems and methods can be described relative to systems and methods that can be implemented across a computer network such as the internet, although such an example is provided for illustration and not limitation. According to an internet embodiment, an internet user can access the internet using what can be referred to herein as an initiating device 21. The initiating device 21 can include a

digital computer system that can utilize a wired or wireless communications link to connect to a communications network such as the internet. A user of the initiating device **21** can utilize different peripheral devices that can be integrated with or otherwise configured for compatible use with the initiating device **21**. For example, the initiating device **21** can include a keyboard, keypad, stylus, digital camera, microphone, etc., that can communicate data to the initiating device **21** using wired or wireless communications systems and/or protocols, etc. The initiating device **21** can be a microprocessor-based system including a computer workstation, such as a PC workstation or a SUN workstation, handheld, palmtop, laptop, personal digital assistant (PDA), cellular phone, etc., that includes a program for organizing and controlling the initiating device **21** to operate as described herein. Additionally and optionally, the initiating device **21** can be equipped with a sound and video card for processing multimedia data. The initiating device **21** can operate as a stand-alone system or as part of a networked computer system. Alternatively, the initiating device **21** can be dedicated devices, such as embedded systems, that can be incorporated into existing hardware devices, such as telephone systems, PBX systems, sound cards, etc. Accordingly, it will be understood by one of ordinary skill in the art that the

1	initiating device **21** described herein has wide applicability and
2	can be incorporated in many systems, and realized in many forms.
3	Those with ordinary skill in the art will recognize that the
4	initiating device **21** can be connected to a network such as the
5	internet and can be equipped with what is well-known as an
6	internet "browser" such as the commercially available Netscape
7	Navigator, Internet Explorer, etc., browsers. Depending upon the
8	initiating device **21** and its configuration, the browser can
9	differ, and hence references herein to a browser can include
10	references to a user interface to the internet or other network,
11	wherein the methods and systems herein are not limited to the
12	browser or other network interface. Furthermore, the initiating
13	device **21** can access the internet using wired or wireless
14	communications links and/or protocols.
15	As is well-known in the art for internet communications, the
16	initiating device **21** can communicate with other devices on the
17	internet. These other devices can be similar to the initiating
18	device **21**, however common terminology includes "servers" that can
19	include or "host" web pages. The initiating device **21** can
20	contact a server **12, 20** and cause the server **12, 20** to provide
21	information for display on the initiating device **21**. Such
22	information can include, but is not limited to, a web page
23	associated with the server **12, 20**. Accordingly, a server **12, 20**
24	can be also be a microprocessor-based system including a computer

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1	workstation, such as a PC workstation or a SUN workstation,
2	handheld, palmtop, laptop, personal digital assistant (PDA),
3	cellular phone, etc., that includes a program for organizing and
4	controlling the server **12, 20** to operate as described herein.
5	Additionally and optionally, the server **12, 20** can be equipped
6	with a sound and video card for processing multimedia data. The
7	server **12, 20** can operate as a stand-alone system or as part of a
8	networked computer system. Alternatively, the server **12, 20** can
9	be dedicated devices, such as embedded systems, that can be
10	incorporated into existing hardware devices, such as telephone
11	systems, PBX systems, sound cards, etc. In some embodiments,
12	servers **12, 20** can be clustered together to handle more traffic,
13	and can include separate servers for different purposes such as a
14	database server, an application server, and a Web presentation
15	server. The server **12, 20** can also include one or more mass
16	storage devices such as a disk farm or a redundant array of
17	independent disk ("RAID") system for additional storage and data
18	integrity. Read-only devices, such as compact disk drives and
19	digital versatile disk drives, can also be connected to the
20	server **12, 20**. As used herein, the term "server" is intended to
21	refer to any of the above-described servers. In an embodiment,
22	the initiating device **21** and the server **12, 20** can be similar
23	systems.

11

1   Alternately, the term "web page" can be understood to

2   include any document that is associated with a Universal Resource

3   Locator (URL) on the internet or World Wide Web. Those with

4   ordinary skill in the art will recognize that there can be

5   varying formats for web pages, and these formats can include HTML

6   code, perl scripts, java scripts, applets, etc., that can be

7   integrated into the documents. Accordingly, an initiating device

8   **21** can contact a server **20** and the server **20** can cause a web page

9   to be transferred to the initiating device **21** and appear on the

10   display of the initiating device **21**, via the browser.

11   Referring back to FIG.1, there is a system server **12** that

12   can be understood to include one or more servers. As FIG. 1

13   illustrates, the system server **12** includes at least one custom

14   dll (dynamic link library) **14** that can be described further

15   herein, at least one CGI (common gateway interface) program **16**

16   that can also be described further herein, and at least one

17   database **18** that can include, for example, audio files. The

18   illustrated database **18**, and the databases disclosed herein, can

19   be accessed locally or through a network such as the internet

20   using wired or wireless communications devices and protocols.

21   The database **18** can be understood to include a memory having one

22   or more physical or logical partitions and/or segments, and can

23   optionally and additionally utilize one or more of well-known

24   database packages including MySQL, SQL, Oracle, Informix, Sybase,

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1   the Freedom Engine, Access, ODBC, DB2, etc., with such examples

2   provided for illustration and not limitation. In an embodiment,

3   the database **18** can reside in a memory of the system server **12**.

4   The illustrated database **18** can also associate audio files

5   with data representing identifiers, for example, a personal

6   identification number (PIN), a media_ID identifier, a customer

7   identification identifier, and/or a duration of the audio file.

8   Although the illustrated systems utilize integers to represent

9   the aforementioned quantities, those with ordinary skill in the

10   art will recognize that the methods and systems are not limited

11   to the identifier format or composition.

12   FIG. 1 also includes a subscriber server **20** that can

13   represent a subscriber to the services or methods and systems

14   provided herein and facilitated by the system server **12**. A

15   subscriber server **20** can be an internet entity having a web page

16   at an identified URL, and a user at an initiating device **21** can

17   cause the subscriber server's web page to be transferred and

18   otherwise displayed on the initiating device **21**. Accordingly,

19   those with ordinary skill in the art will recognize that the

20   subscriber server web page can be encoded using HTML, and the

21   HTML coding can include a recorder applet **22**. When the web page

22   and recorder applet are transferred to the initiating device **21**,

23   the recorder applet can survey the initiating device **21** to

24   determine if the custom dll **14** resides on the initiating device

21. If the custom dll **14** is not present on the initiating device

21, the recorder applet **22** can cause the custom dll **14** to be

retrieved from the system server **12**, via the communications

network or other communications system. The custom dll **14** can

thereafter be stored within the local memory of the initiating

device **21**. In an embodiment, the custom dll **14** includes

versioning flags, hence the recorder applet **22** can automatically

update the latest version of the custom dll **14**.

For the FIG. 1 system, the recorder applet **22** can provide a

Java GUI (graphical user interface) to the initiating device user

21. The GUI can include buttons to record, play, stop, pause,

erase, and preview audio data, etc., and transmit ("save") an

audio file to the system server **12**. The illustrated recorder

applet **22** utilizes the custom dll **14** as a connection between a

native operating system sound API (Application Programmer

Interface) **24** and a microphone **26**. The microphone **26** can be

internal or external to the initiating device **21**. The

illustrated applet **22** can utilize, for example, Java Native

Interface (JNI) to communicate with the native operating system

dlls to open a sound card associated with the initiating device

21, capture sound from the microphone, and store the audio stream

in a temporary file **28** in local memory of the initiating device

21. Accordingly, a user at the initiating device **21** can

manipulate (preview, pause, stop, play, etc.) the audio data in

1	the temporary file **28**, and/or transmit the audio file to the
2	system server **12**.
3	Upon the user indicating a decision to save or transmit the
4	audio file, the recorder applet **22** can utilize a HTTP Post
5	operation to submit the file to a CGI program **16** on the system
6	server **12**. The recorder applet **22** can transmit the audio binary
7	data, and other descriptive information including, for example,
8	the duration of the audio file and at least one identifier that
9	can identify the subscriber. In some embodiments, an identity
10	for the user **21** can be generated. The CGI program **16** can cause
11	the received data to be parsed, can generate a media_ID for the
12	audio file, and can include the received and generated data in
13	the database **18**.
14	In an embodiment according to FIG. 1, the applet **22** can be a
15	generic applet that can be customized using parameters designated
16	by the subscriber server. Accordingly, the GUI and other applet
17	functionality can be specified and/or selected by a subscriber.
18	Referring now to FIG. 2, there is an embodiment **30** that can
19	be utilized optionally and additionally to an embodiment
20	according to FIG. 1. In an embodiment according to FIG. 2, a
21	telephone **38** can be utilized to post information to the system
22	server **12**. The FIG. 2 system server **12** optionally and
23	additionally includes a telephone server **32** and at least one
24	database **18**. The database **18** of FIGs. 1 and 2 can be the same or

different databases. The FIG. 2 system server **12** also includes a program, for example, a Java program, that provides a pop-up window **34**. The program **34** can be invoked through a HTML hyperlink **36** that can be included on a subscriber server's web page that is thereafter downloaded to an initiating device **21** by a user.

When the illustrated pop-up window **34** is activated by the initiating device user **21** through the hyperlink **36** associated with subscriber server's web page, the pop-up window **34** can detect the subscriber server's **20** identity, and can provide the initiating device user **21** with a telephone number to dial, and a Personal Identification Number (PIN) that can be associated with the subscriber server. In the FIG. 2 system, the PIN and telephone number can be provided with a graphic. The user **21** can thereafter utilize the telephone **38** and the provided telephone number to connect to the telephone server **32** that can, according to the PIN (and hence the subscriber server identity), generate a subscriber-customized set of telephone prompts to allow the user **21** to record audio data. For example, the user can utilize telephone keypad buttons and/or voice commands to record, play, preview, stop, pause, erase, and save or transmit the audio data. Accordingly, the audio prompts, prompt order, logic flow between prompts, and actions resulting from prompts, can be customized. Upon termination of the telephone call and recognition of saved

1   data, the telephone server **32** can cause the audio file to be

2   stored in the database **18** with other associated data including,

3   for example, the PIN, a generated media_ID, and duration data

4   based on the created audio file.

5   Those with ordinary skill in the art will recognize that the

6   FIG. 2 pop-up window **34** can be implemented using a high-level

7   language such as Java, C, C++, etc., or assembly language,

8   although such examples are provided for illustration and not

9   limitation.

10   In an embodiment according to FIG. 2, users **21** can be

11   associated with a subscriber server **20** and can accordingly be

12   provided pre-defined PINs that can allow the users **21** to provide

13   audio data directly via telephone without accessing a subscriber

14   web page to obtain a telephone number and/or PIN.

15   Those with ordinary skill in the art will recognize that the

16   methods and systems of FIGs. 1 and 2 can be combined to a single

17   system that allows posting of audio data via microphone and/or

18   telephone. In an embodiment with such capability, an applet can

19   present an option graphic to the user **21** that allows the user to

20   select the microphone or telephone posting methods and systems.

21   Referring now to FIG. 3, there is a representative block

22   diagram **50** that employs methods and systems according to FIGs. 1

23   and 2. As FIG. 3 indicates, the system server **12** can include a

24   file server **52** that can include audio files. In the FIG. 3

1   system, the audio files can be stored in ".wav" format, although

2   such an example is provided for illustration and not limitation.

3   The file server **52** can be in communication with a database **18**

4   that can associate Link_keys to media_IDs. The FIG. 3 database

5   **18** can be the same or a different database as indicated and

6   otherwise depicted in FIGs. 1 and 2. For the FIG. 3 systems and

7   methods, the media_IDs associate to an audio file, and for the

8   illustrated systems and methods, an audio file has a unique

9   media_ID. Alternately, a media_ID can be associated with more

10   than one Link_key, although in some embodiments, a unique

11   relationship between media_ID and Link_Key can be provided.

12   Furthermore, a Link_Key can be associated with a subscriber

13   server **20**. As FIG. 3 illustrates, the subscriber server **20** can

14   have a web page that includes an HTML applet tag **54** that includes

15   a Link_key associated with the subscriber and/or subscriber

16   server **20**. The HTML applet tag **54** references an applet on the

17   system server **12**. The media_ID can also be generated using an

18   applet on the system server **12**. In some embodiments, the

19   media_ID can be the same as a PIN or customer ID, and in such

20   embodiments, a separate media_ID may not be generated.

21   With continued reference to FIG. 3, when a user of an

22   initiating device **21** transfers the subscriber server's **20** web

23   page, the applet is transferred to the initiating device **21** and

24   communicatively connects the initiating device **21** to the system

1   server **20**. Accordingly, for the illustrated system, when the

2   applet is activated or receives a request to play an audio file,

3   the applet makes a standard HTTP connection over port 80, to the

4   system server **12**. In an embodiment, the applet can utilize a

5   first "get" to retrieve information about the audio file that

6   includes the duration and the physical location. In a second

7   "get", the applet can retrieve the audio file utilizing a data

8   buffering technique to determine a buffer size based on the

9   internet or other network latency issues, and the user's **21**

10   connection speed.

11   In one embodiment, the audio file can be offered using an

12   8KHz GSM format, where the applet can decode the audio stream in

13   real time to a 8KHz mu-law format that can be compatible with

14   Java's audio API. Additionally and optionally, a 8KHz mu-law

15   format can be used that can stream at 8Kbps using an applet

16   footprint on the initiating device **21**. The applet for retrieving

17   audio data can therefore provide an interface between the audio

18   file and a destination for the audio data, where the destination

19   can include a sound card or other interface to allow the audio

20   data to be heard or otherwise presented to a user of the

21   initiation device **21**.

22   The applet for retrieving audio data and/or files can also

23   be customized according to parameters established on the

24   subscriber server **20** and/or by an entity having administrative

1   responsibilities for the subscriber server's web page.

2   Accordingly, the applet can be configured to provide a GUI or not

3   provide a GUI. If a GUI is provided, the GUI can be customized

4   with play, pause, stop, etc., buttons, a progress bar, various

5   background and surround images, etc., and such customization

6   parameters are provided for illustration and not limitation.

7   For example, referring to FIG. 4, a relationship between

8   Link_keys, media_IDs, and audio files can be shown according to

9   the methods and systems described herein. It can be understood

10   that other data, such as duration of the audio file, can also be

11   associated with the information displayed in FIG. 4, and hence

12   FIG. 4 is merely representative of some information that can be

13   associated. Accordingly, when the initiating device 21 of FIG. 3

14   activates the applet and the applet establishes a HTTP connection

15   over port 80, the Link_key provided by the applet can identify a

16   media_ID, which can thereafter identify an audio file.

17   Furthermore, using a method or system according to FIGs. 1 and/or

18   2, an entity associated with the subscriber server 20, either

19   using the telephone 38 and/or the microphone 26, and either with

20   or without the use of an initiating device 21, can create a new

21   audio file using methods and systems described herein. As

22   indicated herein, a new audio file can be accompanied by an

23   associated media_ID. By specifying a PIN and/or subscriber 20

24   with the creation of the new audio file (either by telephone or

1	microphone), the system server **12** can associate the new audio
2	file with a Link_Key (associated with a subscriber server **20**)
3	using a notifier module **56**, and cause the database **18** to be
4	updated with the new media_ID and hence, the associated new audio
5	file. Using these methods and systems, a subscriber can modify
6	the audio content associated with the subscriber server's web
7	page, without modifying the web page.
8	In an embodiment, a subscriber can be provided with a
9	telephone number and associated PIN to generate new audio files.
10	Additionally and optionally, a subscriber can be provided with a
11	URL that can provide a microphone applet that can prompt the user
12	for a PIN, and thereafter associate a new audio file with a
13	particular Link_ID.
14	In some embodiments according to FIG. 4, a history of
15	Link_ID associations with media_IDs and audio files can be
16	preserved to allow a subscriber to re-access or review audio
17	files previously associated with the subscriber's web page. In
18	some embodiments, a subscriber can have multiple PINs for
19	multiple web pages, or multiple PINs for a single web page.
20	Referring now to FIG. 5, there is an embodiment employing
21	the methods and systems herein that can allow various individuals
22	to post audio on a subscriber's web page. Consider, for example,
23	a web page that can be utilized for auctions, or additionally and
24	optionally, for presenting items for sale, etc. In some

1   embodiments of these web pages, a user can register with the

2   subscriber's web page by listing an item for sale. An applet or

3   script can provide the user with a form for detailing particulars

4   related to the item. In one embodiment, the user can be provided

5   with an option for generating an audio file for association with

6   the item. In one embodiment of such a system, the user can be

7   presented with a "selection applet" that can be embedded within

8   the subscriber's web page, and when selected, provides the user

9   with an option of adding audio capability via a microphone or

10   telephone. Depending upon the selection of microphone or

11   telephone, the system server **12** can be contacted to generate a

12   PIN, or PIN and telephone number combination, respectively. The

13   PIN and/or a customer ID number, or other identification data,

14   can thereafter be utilized to associate the yet-to-be-created

15   audio file with the subscriber server **20** and the item or product

16   that the user is advertising. Using the methods and systems

17   described herein, the user can then view a customized applet

18   (microphone) or access customized telephone prompts (telephone)

19   to record, review, etc. an audio file as provided previously

20   herein. Once the audio file and PIN are received and associated,

21   a media_ID can be generated and associated with the audio file

22   and stored in the database **18**. The notifier module **56** can

23   thereafter generate a HTTP post to the subscriber server **20** to

24   provide the media_ID and the associated customer information to

1 the subscriber server **20**. The subscriber server **20** can

2 thereafter create a HTML applet tag that includes the media_ID,

3 such that when the subscriber web page is downloaded by a user

4 and the user selects an option to listen to the audio data, a

5 connection to the system server **12** and the audio file can be made

6 using the media_ID. In some embodiments, the subscriber server

7 **12** can therefore maintain a database or other record of media_IDs

8 and customer IDs and/or product identification, or other type of

9 association.

10 For the systems and methods described according to FIG. 5,

11 the HTTP post from the notifier module **56** can be received by a

12 CGI program on the subscriber server **20**. Accordingly, clients

13 (e.g., those posting items and/or audio on the subscriber server

14 **20**) of the subscriber server **20** can modify associated audio

15 automatically and independently, without requiring the subscriber

16 to change the web page. In other embodiments, a subscriber's CGI

17 program that receives the HTTP post, may not automatically update

18 the file, and may provide a mechanism to allow approval of audio

19 before posting.

20 The systems and methods disclosed herein can thus be widely

21 utilized. For example, the systems and methods according to FIG.

22 3 can be deemed "static" systems and methods that can include a

23 non-changing PIN that can allow a web page to be automatically

24 updated with audio without requiring a subscriber to change or

23

otherwise alter a web site. Other embodiments according to FIG.
5 can be termed "dynamic" systems and methods that can provide a
new PIN to an entity to allow a conditional updating of audio
data based on, for example, proper identification (customer ID,
PIN, or other identifying information) and/or approval by the
subscriber server. It can be understood in such systems that
PINs can be dynamically generated.

In another embodiment that can be referred to herein as
"hybrid" systems and methods, non-changing PINs can be provided
to certain entities (e.g., individual, group, or other capable of
recording audio); however, rather than automatically causing an
update of the information per the static systems and methods, the
hybrid systems can allow approval of the audio postings per the
dynamic systems and methods. Accordingly, a system and method
according to FIG. 6 can be understood to represent hybrid methods
and systems. As indicated in FIG. 6, a subscriber server **20** can
be equipped, as in the dynamic systems and methods, with a web
page that includes a HTML applet tag having a media_ID. The web
page can accordingly be downloaded to an initiating device **21**.
Accordingly, a user with a PIN can either activate a URL to
record audio data using a microphone applet, or record audio data
using a telephone (either after accessing the subscriber web
site, or independent of the web site). Once the recorded data is
posted to the file server **52** of the system server **12** and a new

1   media_ID is generated and stored in the media ID database **18**, the

2   notifier module **56** can generate an email to the subscriber **20** to

3   indicate that a new audio file is available, specifying the new

4   media_ID. Accordingly, a subscriber, using either a specified

5   URL and PIN, or a designated telephone number and PIN, can access

6   the audio data via the new media_ID, to approve the audio. Upon

7   approval, the subscriber **20** can alter the HTML applet tag **54** to

8   include the new media_ID.

9   As indicated herein, for the systems and methods, audio

10   files can be accessed for listening via a URL or an applet tag

11   that can be embedded in a web page. Additionally, audio files

12   can be accessed independent of a web page, via a telephone, with

13   the appropriate PIN and/or customer ID, and media_ID.

14   Those with ordinary skill in the art will recognize that the

15   subscriber server **20** of the illustrated embodiments can be

16   replaced with or otherwise be accompanied by an email server.

17   Accordingly, in one such embodiment, a user can access a web

18   page, and be provided with an option to post audio data via a

19   microphone or telephone, as provided herein. The user can also

20   designate one or more email addresses, a written message, a

21   subject, cc'ed email addresses, etc. Upon posting of the audio

22   message to the system server **12**, a media_ID can be generated and

23   the notifier module **56** can post the media_ID and email

24   information to an email server that can generate an email. The

1   email can be, for example, a HTML document that can include HTML

2   applet tags that can reference applets on the system server **12**.

3   In one embodiment, the HTML email document can include a

4   reference to the audio player applet with standard (customized)

5   features selected.

6   What has thus been described is a system and method to allow

7   communications systems users, such as internet users, to create

8   and retrieve audio files from a centrally stored database,

9   without requiring specific installation of software or hardware.

10   In one embodiment, the systems and methods are implemented

11   entirely in JAVA to allow compatibility across all operating

12   systems and to preclude specific installation requirements. The

13   audio data may be posted to an internet browser using HTTP

14   conventions to eliminate firewall and other filtering issues.

15   Audio posting and listening capabilities can also be provided to

16   subscriber websites without imposing software, hardware, or

17   bandwidth constraints. Specified URLs on subscriber websites may

18   call a generic applet that, together with subscriber

19   identification information, allows for the display of customer

20   specific graphics on the subscriber website. The centrally

21   located database may be categorized by subscriber for privacy

22   issues.

23   The methods and systems described herein are not limited to

24   a particular hardware or software configuration, and may find

1 applicability in many computing or processing environments. The

2 methods and systems can be implemented in hardware or software,

3 or a combination of hardware and software. The methods and

4 systems can be implemented in one or more computer programs

5 executing on one or more programmable computers that include a

6 processor, a storage medium readable by the processor (including

7 volatile and non-volatile memory and/or storage elements), one or

8 more input devices, and one or more output devices.

9 The computer program(s) is preferably implemented using one

10 or more high level procedural or object-oriented programming

11 languages to communicate with a computer system; however, the

12 program(s) can be implemented in assembly or machine language, if

13 desired. The language can be compiled or interpreted.

14 The computer program(s) can be preferably stored on a

15 storage medium or device (e.g., CD-ROM, hard disk, or magnetic

16 disk) readable by a general or special purpose programmable

17 computer for configuring and operating the computer when the

18 storage medium or device is read by the computer to perform the

19 procedures described herein. The system can also be considered

20 to be implemented as a computer-readable storage medium,

21 configured with a computer program, where the storage medium so

22 configured causes a computer to operate in a specific and

23 predefined manner.

1   Although the methods and systems have been described

2   relative to a specific embodiment thereof, they are not so

3   limited. Obviously many modifications and variations may become

4   apparent in light of the above teachings. For example, although

5   the illustrated embodiments included block diagrams, the blocks

6   and associated features can be combined in different ways and the

7   illustrated presentation of features is provided merely to

8   facilitate understanding and not to provide limitation.

9   Additionally, many devices exist for accessing the internet

10   without the use of a computer, for example, using a modem that

11   provides information to a television screen for display. The

12   invention herein is not limited to the Network User access

13   method, and any acceptable configuration or method for accessing

14   the internet or communications network is acceptable. Although

15   the methods and systems disclosed were applied to a web page, the

16   methods and systems can be used to generate another type of HTML

17   document, such as an email that can be provided to an email

18   server. It can thus be understood that an email server can

19   replace or otherwise accompany the subscriber server in the

20   illustrated embodiments. Additionally, although HTML documents

21   were used in the example systems and methods, other document

22   formats, including XML, SGML, GML, or other markup languages, can

23   be used. Although the methods and systems utilized Java for

24   components, other languages can be used. Similarly, although

1   applets and applet tags were illustrated, other methods of

2   providing pointers can be used. Although the audio data can be

3   played and otherwise presented to a speaker or other listening

4   device as an output device, the audio data can also be converted

5   for presentation, from audio, to text, for example, using well-

6   known speech recognition products. In such an embodiment, the

7   output device for the audio can be a speech recognition module.

8   Many additional changes in the details, materials, and

9   arrangement of parts, herein described and illustrated, can be

10   made by those skilled in the art. Accordingly, it will be

11   understood that the following claims are not to be limited to the

12   embodiments disclosed herein, can include practices otherwise

13   than specifically described, and are to be interpreted as broadly

14   as allowed under the law.